

## Chronic Disease Indicators: Indicator Definition



### Fruit and vegetable consumption among adults aged $\geq 18$ years

Category:	Physical Activity and Nutrition
Demographic Group:	Resident persons aged $\geq 18$ years.
Numerator:	Respondents aged $\geq 18$ years who report eating fruits and vegetables $\geq 5$ times/day.
Denominator:	Respondents aged $\geq 18$ years who report eating fruits and vegetables any number of times per day, including zero (excluding unknowns and refusals).
Measures of Frequency:	Annual prevalence — crude and age-adjusted (standardized by the direct method to the year 2000 standard U.S. population, distribution 9*) — with 95% confidence interval.
Time Period of Case Definition:	Past seven days.
Background:	In 2002, a total of 77% of adults did not consume a daily average of $\geq 5$ servings of fruits and vegetables. Men were less likely to consume $\geq 5$ servings than were women.
Significance :	Physical inactivity and unhealthy eating contribute to obesity and a number of chronic diseases, including some cancers, cardiovascular disease, and diabetes. Compared with people who consume a diet with only small amounts of fruits and vegetables, those who eat more generous amounts as part of a healthful diet are likely to have reduced risk of chronic diseases, including stroke and perhaps other cardiovascular diseases, and certain cancers.
Limitations of Indicator:	The indicator conveys the percentage of the adult population who report, on average, consuming fruits and vegetables $\geq 5$ times/day. It does not convey the average number of daily servings of fruits and vegetables consumed. Studies have demonstrated a dose-response effect associated with increased consumption of fruits and vegetables, not a threshold effect of 5 servings/day.
Data Resources:	Behavioral Risk Factor Surveillance System (BRFSS). <a href="http://www.cdc.gov/brfss/">http://www.cdc.gov/brfss/</a>
Limitations of Data Resources:	As with all self-reported sample surveys, BRFSS data might be subject to systematic error resulting from noncoverage (e.g., lower telephone coverage among populations of low socioeconomic status), nonresponse (e.g., refusal to participate in the survey or to answer specific questions), or measurement (e.g., social desirability or recall bias).
Healthy People 2010 Objectives:	19-5: Increase the proportion of persons aged $\geq 2$ years who consume $\geq 2$ servings of fruit/day. 19-6: Increase the proportion of persons aged $\geq 2$ years who consume $\geq 3$ daily servings of vegetables, with at least one third of them being dark green or orange vegetables.

\* See Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics, 2001. Healthy people 2010 statistical notes, no. 20. <http://www.cdc.gov/nchs/data/statnt/statnt20.pdf>